

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-19 (canceled)

20. (previously presented): A wireless communication apparatus for assigning multi-paths to Rake receiver fingers, the apparatus comprising:

a processor which includes a path search scheduler for receiving signals from higher layers and generating scheduling data;

a memory device in communication with the processor, wherein the memory device has a first portion for receiving the scheduling data and storing the results of a pilot path search process performed by the path search scheduler, and a second portion for storing the results of a pilot strength measurement (PSM) process running on the processor, wherein the processor implements a path position detection process and a finger assignment process for providing an assignment to a Rake finger pool, the path position detection process searching for all multi-paths for a plurality of wireless transmit/receive units (WTRUs) in a round-robin search order; and

a path search vector correlator (VC) grid for receiving data from the first portion of the memory device and providing an output which is evaluated by the PSM process to generate evaluation results which are stored in the second portion of the memory device for access by the path position detection process.

21. (new): The wireless communication apparatus of claim 20 wherein the apparatus is further configured to assign multi-paths to Rake receiver fingers by establishing a Rake finger assignment database.

22. (new): The wireless communication apparatus of claim 21 wherein a plurality of multi-path signals are categorized in the database into a verified group and an unverified group, wherein the verified group includes multi-path signals that have been detected more than once, and the unverified group includes multi-path signals that have not been detected more than once.

23. (new): The wireless communication apparatus of claim 22 wherein the multi-path signals are categorized in the verified group into an assigned subgroup and an unassigned subgroup, each of the multi-path signals in the assigned subgroup is assigned to a Rake receiver finger and each of the multi-path signals in the unassigned subgroup is not assigned to a Rake receiver finger, and each multi-path signal is assigned a respective bin in the database, each bin having a data structure that includes a pilot phase data field and a verification flag data field.

24. (new): The wireless communication apparatus of claim 23 wherein, during a measurement interval, a plurality of newly measured multi-path signals are received, each newly measured multi-path signal is compared to the multi-path signals in the database to determine if each newly measured multi-path signal is found in the database and, if a multi-path signal in the database that belongs to the unassigned subgroup matches a newly measured multi-path signal, the verification flag data field is set such that it indicates that the multi-path signal

is verified, and the relative phase of the multi-path signal is updated in the pilot phase data field.

25. (new): The wireless communication apparatus of claim 24 wherein the signal strength of each multi-path signal is compared to a predetermined noise floor threshold and, if the signal strength of the multi-path signal is less than the noise floor threshold, the multi-path signal is removed from the database.

26. (new): The wireless communication apparatus of claim 25 wherein if the removed multi-path signal is categorized in the assigned group, the Rake receiver finger is no longer assigned to the removed multi-path signal.

27. (new): The wireless communication apparatus of claim 26 wherein if a newly measured multi-path signal is not found in the database, the newly measured multi-path signal is added to the database.

28. (new): The wireless communication apparatus of claim 22 wherein each multi-path signal is assigned a respective bin in the database, the bin including a data structure including a data field indicating the averaged signal strength of the multi-path signal.

29. (new): The wireless communication apparatus of claim 22 wherein each multi-path signal is assigned a respective bin in the database, the bin including a data structure including a data field identifying an assigned Rake receiver finger.